

*Examiner's Initials*

Serial No.: 10/079,738  
Atty. Docket No.: D5151

**REMARKS**

In a first Office Action mailed 3 December 2003, the Examiner acknowledged election of claims 1-9 for prosecution in the present application. Claims 10-14 are indicated as being withdrawn from prosecution. The Office Action Summary indicated claims 1-8 as rejected and claim 9 as objected to. However, the body of the Action indicated that all of the claims not withdrawn were rejected for obviousness under 35 U.S.C. 103(a) over various combinations of prior art references.

Specifically, claims 1 and 6 were rejected as obvious over Johnson (US-P 4,989,412) and Caley et al. (CA-PA 2,199,687). The same claims were also rejected over the same combination further in view of Dietzsch (DE-OS 37 38 425) or Arold et al. (DE-PS 196 51 425). Claims 2-5 were rejected over the above combination further in view of Masauju et al. (US-P 5,939,853) and Han (EPO-PA 0 983 884). Claims 4 and 5 were further rejected over the combination directed against claims 2-5 further in view of Sumikawa et al. (US-P 4,383,642) or Nilsson et al. (US-P 4,519,302). Claims 7 and 8 were rejected over the combination directed against claim 6 further in view of Burst et al. (US-P 4,956,979) or DeRees (US-P 3,170,509). Claim 9 was rejected over the combination directed against claim 1 further in view of Sjöqvist (US-P 4,353,430). The rejection of the claims is traversed. Claim 1 has been amended, in part by the incorporation of the elements of claim 6, to overcome the art. Claim 9 has also been amended. Claim 6 has been canceled. Claims 1-5 and 7-9 remain active.

The Art cited and applied by the Examiner is discussed below to the extent of any disagreement with the Examiner's analysis. Specifically, the applicant questions the propriety of combining the Johnson and Caley references in view of differences between what the references teach and what was contended for them in the Action.

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Generally, the present invention and most of the art references relate to Vehicle HVAC systems. The Johnson reference, US-Patent 4,989,412 is cited as teaching, among other things, splitting evaporation and heating modules, and the placement of the evaporator on the engine compartment side of a vehicle firewall. [Locating the evaporator in the engine compartment and the heater core in the passenger compartment is in itself common, and shown in several, but not all of the applied references: see Arold et al. '669, Fig. 1, also Dietzsch '425 Fig. 1, etc.] However, in Johnson "the evaporator 16 [which] is mounted by bracket 27 to the rear portion of the engine." and not to the firewall. (Johnson '412 patent, col. 3, lines 9-10.) This is done so that ". . . rigid tubes may be used as opposed to the flexible tubes necessary to accommodate engine movement in a conventional system . . ." (Johnson, col. 3, lines 14-16.) By mounting the refrigeration system on the engine and not to the firewall Johnson makes it possible to allow testing of the refrigeration system prior to installation of the engine/evaporator combination in the vehicle on the vehicle. (Johnson '412 patent, col. 2, lines 27-34.). It is this arrangement which makes possible the statement in Johnson relating to the advantages of modularity found at Col. 1, lines 47-55. More is required than simply splitting the HVAC unit into modules to provide the advantages...[which] allow for testing of the refrigeration system prior to assembly on the vehicle. But on engine mounting of the evaporator cuts against Caley's teaching.

Regarding the Caley et al. reference, CA-Patent Application 2,199,687, no teaching is provided to suggest that Caley et al. should incorporate dividing the "air handler 22 into two segments" as done in Johnson. Caley et al. is directed to an air handler optimized for ease of maintenance. This is to be achieved in part by providing that the "fluid conduits" to the system's heat exchangers remain connected upon removal of the system (See page 2, line 34 to page 3, line 3). Caley would not work to its intended purpose if modified by Johnson, since

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removal of the heat exchanges would require either disconnection from tubing, were rigid tubing used, or removal of the entire engine/evaporator assembly. Accordingly, the combination of the references is inappropriate since such a combination would defeat the purpose of each.

None of the references show a heater core installed in a friction retaining slot allowing removal of the core upon simple removal of a cover. Claim 1, the only independent claim has been amended to incorporate this feature as an element.

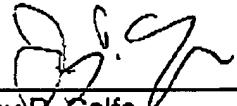
The remaining dependent claims recite additional limitations and thus also are patentable. In particular, claim 9 has been amended to require distinct heater and evaporator modules which fit around either of left hand or right hand side openings through the dash panel. This patentably distinguishes over the prior art. Applicant appreciates the Sjöqvist '430 reference which provides that

The other opening 9 or 77 [of two through a firewall] in the cowl panel 7 is then used for taking through and fitting the air-conditioning system of the vehicle. Said system can comprise a duct housing accommodating heat and fan for conditioning ventilation air before taking it into the compartment. The duct housing can thereby be provided with a flange having a hole pattern in agreement with the hole pattern round the holes 9, 77 in the cowl panel 7. However, Sjöqvist proposes no specific structure and seems to describe only provision of a heat exchanger for a cooling system.

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Applicant believes the Claims as amended are in condition for allowance and respectfully requests favorable action by the Examiner.

Respectfully submitted,



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